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Bechuanaland Protectorate

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ANNUAL MEDICAL & SANITARY REPORT

FOR THE YEAR 1958

BUREAU OF HYGIENE & TROPICAL DISEASES
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ANNUAL MEDICAL AND SANITARY REPORT

FOR THE YEAR 1958

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BECHUANALAND PROTECTORATE

ANNUAL MEDICAL

and

SANITARY REPORT

FOR THE YEAR 1958

SECTION I - ADMINISTRATION

1. STAFF:

SENIOR SERVICE

	Director of Medical Services
1	Medical Officer of Health
13	Medical Officers
2	Health Inspectors
3	Field Officers
1	Matron
3	Sisters-in-Charge
11	Nursing Sisters
1	Nursing Sister (District)
1	Housekeeper
1	Administrative Assistant
2	Clerks
2	Lady Clerks

JUNIOR SERVICE

9	Health Assistants
7	Clerks
28	Dispensers
1	Microscopist
1	Senior Sanitary Inspector
7	Sanitary Inspectors
1	Pupil Sanitary Inspector
4	Rodent Assistants
1	Senior Staff Nurse
8	Male Nurses
42	Staff Nurses
15	Medical Orderlies
29	Probationer Nurses
4	Male Attendants (Mental Home)
3	Female Attendants (Mental Home)
7	Cooks
11	Drivers
7	Lorry Labourers
4	Gardener/Messengers
4	Launderers
49	General Duty Assistants.

/2........

2. The European staffing situation improved somewhat during the year as two Medical Officers and three Nursing Sisters were engaged, and there were no further resignations. At the end of 1958 there were 2 vacancies for Medical Officers and 5 for Nursing Sisters.

3. VISITORS:

Dr. A. Geser,	Tuberculosis Consultant, World Health Organization.
Mr. R. H. Belcher,	Acting High Commissioner for the United Kingdom, Pretoria.
Lady Limerick,	British Red Cross Society.

4. LEGISLATION:

Hospital Maintenance Fees -	Government Notice No. 12. 25.4.58
Sanitary Regulations - Application to Ghanzi	Government Notice No. 23. 12.9.58.

SECTION II - PUBLIC HEALTH

5. Medical Field Surveys. Field surveys were continued during 1958, though handicapped by staff shortages due to overseas leave and vacancies during several months of the year. Collections of blood smears, and of Ornithodorus ticks, and of fresh water snails, were continued from previous years. The Medical Officers at Maun and at Gaberones took an active part in this work and in making urine and faeces tests for Bilharzia among school children, in the areas where Bulinus (Physopsis) or Planorbis species were found. The blood slides records of 1958, together with mosquito larval searches in many inhabited localities agreed with those of recent previous years. They indicate a low and intermittently seasonal incidence of malaria and anopheline mosquito, south of 21° south, and a rising incidence where swamps occur to the north of that parallel. Relapsing fever was absent from smears which were taken by field workers in the districts outside the hospitals, but the number of pyrexial persons tested in the field was too small for this observation to be significant.

6. District snail and urine tests agreed with the findings of previous years. Potential bilharzia carriers were identified in the moister parts of N'gamiland and Chobe districts and along the eastern side of the Protectorate. There were no human infections of either S.mansoni or S.haematobium derived in the Maun area, but several intermittently flowing streams which discharge into the Limpopo from Bechuanaland, and the Limpopo itself, provided the sources in human cases. Bulinus Physopsis species were found only in pools formed along river beds. Bulinus Physopsis was not found in artificial dams nor pools which were not connected with a river. Numerous "pans"

yielded Bulinus species and Bulinus forskalii among other snails, but Physopsis was not found in such sites.

7. Ornithodorus moubata and Ornithodorus savignyi in connection with relapsing fever were found in huts along all cattle trade routes and in most villages in the Kalahari and the eastern side of the territory. The Medical Officer at Maun found specimens of Ornithodorus moubata to be infected. Those infected ticks and a relapsing fever case associated with them, provided a source of Borrelia duttoni which has been the starting point of interesting research by Dr. Zumpt and his associates in the South African Institute for Medical Research, Johannesburg and Dr. Walton of the London School of Tropical Medicine. Dr. Zumpt will publish the results of his research in due course.

8. Specimens of Ornithodorus savignyi were collected from numerous sandy and dusty sites, chiefly in the shade of trees where donkeys and other domestic animals and farm stock rest in the heat of the day. None of these were infected with B.duttoni.

NOTES ON DISEASES OF PUBLIC HEALTH INTEREST

9. Bilharzia. 140 cases only were diagnosed.

10. The survey of carrier snail habitats continued for the third successive year. High proportions of urinary infections in school children were found at Palapye and around the headwaters of the Notwani river. This disease has not been found in the Okovango Swamps and rivers near Maun, although carrier snails of two species of the worm are present in quantity. Three cases seen at Maun were adult travellers from Palapye (1) and Mochudi (Notwani area)(2), Eastern Bechuanaland, from which areas the majority of cases were notified.

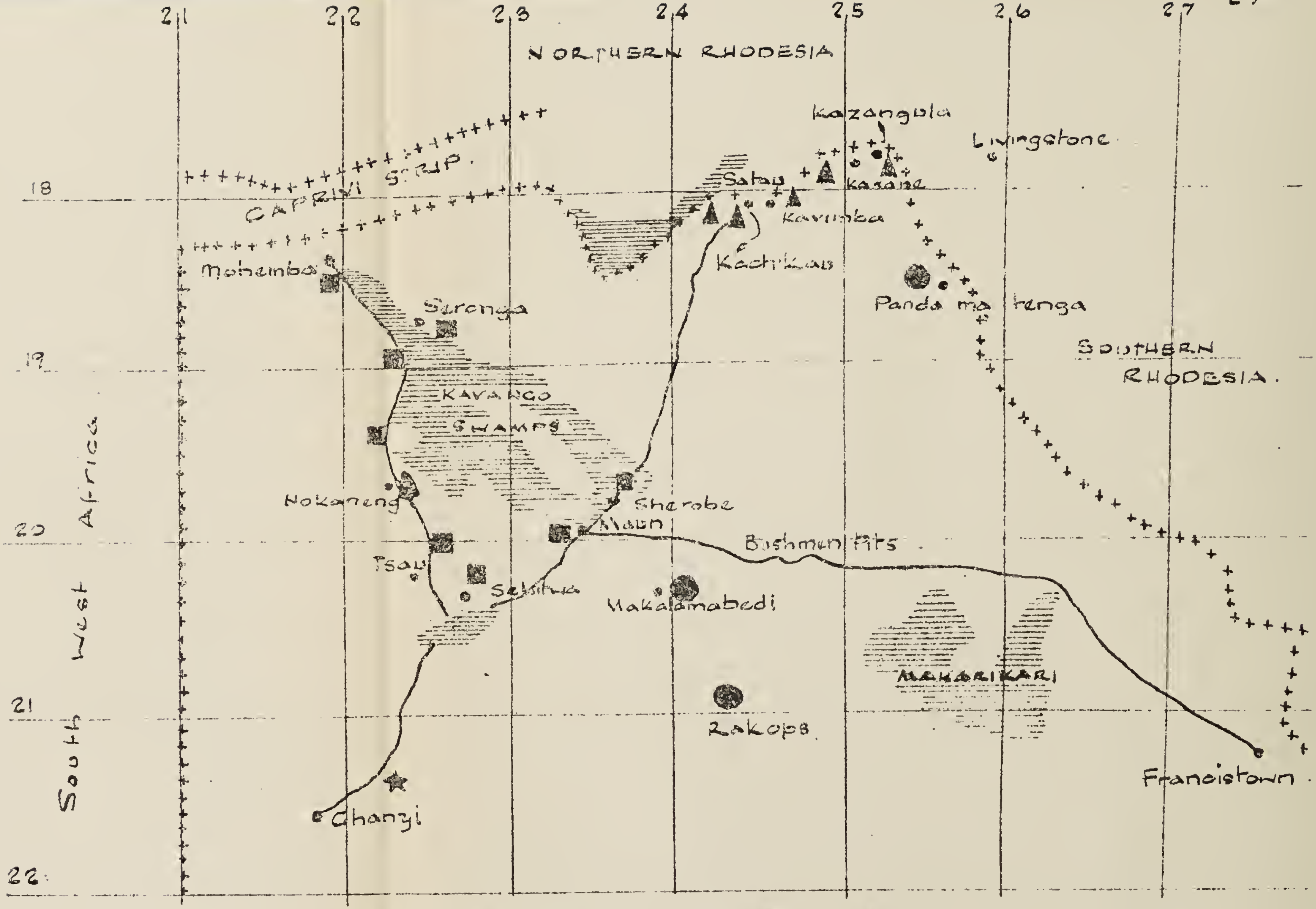
11. Diphtheria. Diphtheria was reported in small scattered outbreaks, 187 cases being reported. Prophylactic inoculations were offered at all medical stations. Trained field staff, using combined whooping cough/diphtheria prophylactic for small children and anti-diphtheria prophylactic alone for other age groups, toured the south-eastern areas, maintaining and extending the protection conferred by the UNICEF sponsored campaign of 1956/57. Approximately 25,000 inoculations were recorded for diphtheria prevention, many of which combined the whooping cough vaccine.

12. The inoculation material was provided free of charge by UNICEF.

13. Dysenteries. Thirty-seven cases of amoebic, 360 cases of bacillary and 599 cases of non-specific dysentery were diagnosed. A total of 4 deaths occurred. It is again emphasised that the absence of local laboratory facilities make exact diagnosis very difficult. Insanitary customs, seasonal water shortages and primitive wells contribute much to the existence of these disorders.

14. Enteric Fever. A total of 34 cases was reported.

15./......



BECHUANALAND PROTECTORATE

MAUN MEDICAL DISTRICT

MALARIAL SURVEY IN SCHOOL CHILDREN.

▲ - 70% + MALARIA
▨ - 30% + MALARIA.
● - 20% + MALARIA
★ - 0% MALARIA

15. An outbreak occurred at Morwa, a village of the Bakgatla Reserve, in November. A total of 12 cases was admitted to hospital and there were 2 deaths. Thorough investigation failed to reveal the cause of the outbreak. About 600 persons in the area were given T.A.B. vaccine and the outbreak subsided within a few weeks.

16. Leprosy. Eight new cases were diagnosed, all from N'gamiland. In all, 37 cases were reported. These cases are treated at the Botsabelo Leper Institute, Basutoland.

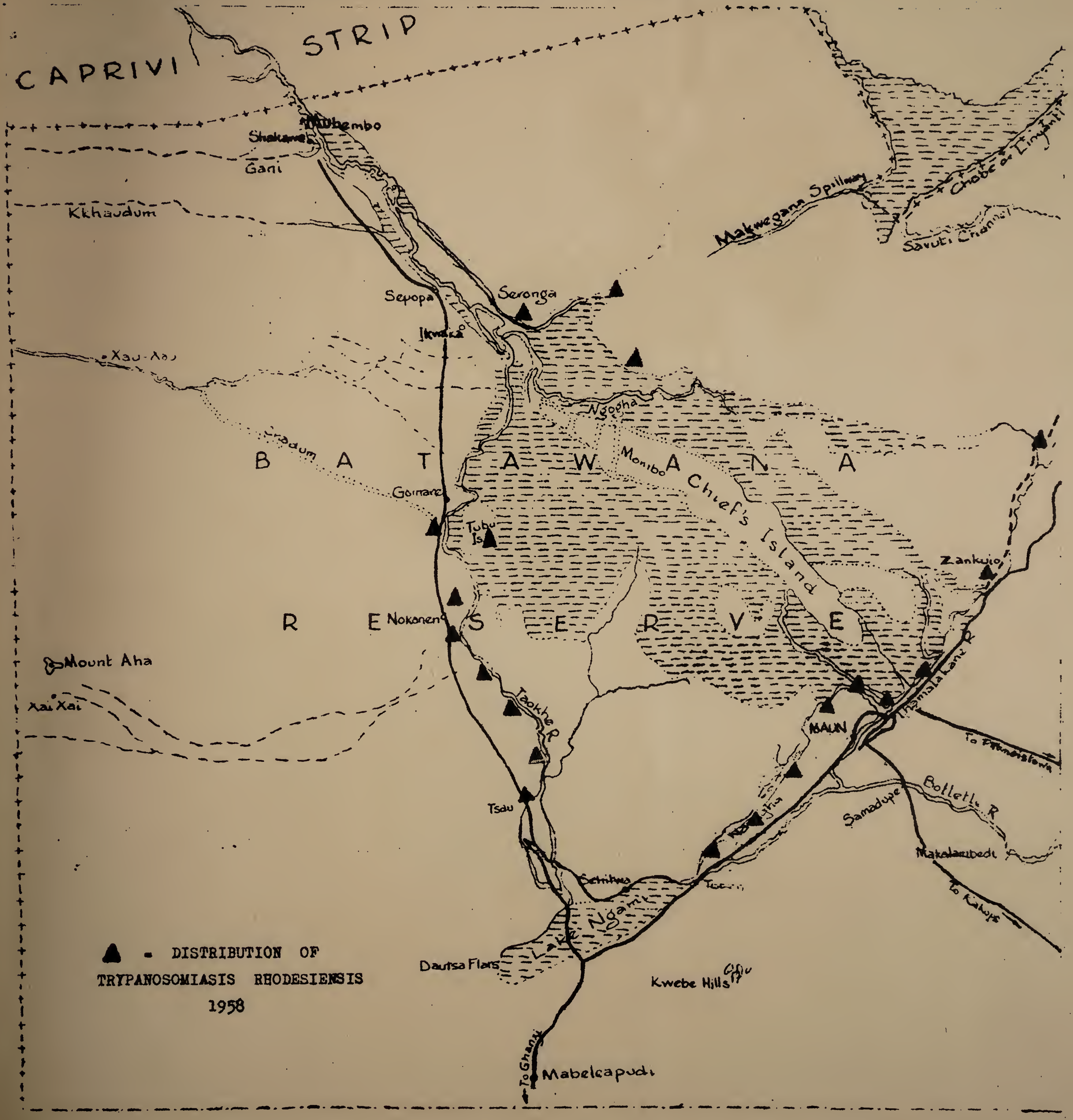
17. Malaria. 2,756 cases were reported, all save 51 of which occurred in N'gamiland and the Chobe areas.

18. Malaria distribution received close attention, especially by the medical staff of Maun working in the Chobe and Okovango Swamps areas, some of which are hyperendemic. Elsewhere in the Protectorate malaria was either absent or was of minor public health importance. Arrangements were made in December for closer co-operation with the Transvaal Health authorities in efforts to attain the World Health Organization ideal of eradicating malaria from Southern Africa.

19. Altitude and climate appear to eliminate Anopheles gambiae from the territory south of latitude 22° S. during the winter months of years with average climatic conditions. Cold winds and intermittent frost combine with a very low relative humidity in the southern part of the Protectorate during the long dry winter months, and these conditions, together with the absence of surface waters, appear also to remove all individuals of Anopheles funestus mosquitoes from normal habitats. Search for the hibernating places of A. funestus is planned for 1959, especially along the Limpopo River bed. The remote possibility of A.gambiae hibernating in some deep rough-sided limestone wells of the Kalahari Desert also requires investigation. Redistribution of Anopheles gambiae into Bechuanaland can occur in summer yearly from across the east boundary. The Limpopo valley brings a moist lowland prong westward beyond Beit Bridge from the 1,600 foot contours of the Southern Rhodesia and Transvaal borders. This area is, however, intensively controlled by the Union Health Department and by Rhodesia. In the extreme north the Zambesi valley reaches the Victoria Falls in the climatic conditions of tropical rain forest. The extensive Chobe River swamps adjacent to the Zambesi, and the Okovango Swamps lie in a semi-tropical climatic area. In the absence of accurate mosquito control over this vast sparsely populated area, in roadless, undeveloped surroundings, the Medical Officer, Maun records the results of limited surveys varying between 0% and 70% malaria infections of African children. (see map).

20. Considerable human and stock movement occurs between the north and the south eastern side of the Bechuanaland Protectorate and this traffic may be responsible for periodic outbreaks of malaria. Cases reported by dispensaries, however, are not all microscopically confirmed.

NGAMILAND DISTRICT OF THE BECHUANALAND PROTECTORATE



▲ - DISTRIBUTION OF TRYPANOSOMIASIS RHODESIENSIS 1958

21. Malnutrition and deficiency diseases. 6,116 cases were reported with 14 deaths. Of these 23 were diagnosed as beri-beri, 485 as pellagra and 490 as scurvy, the remaining 5,118 being notified as "malnutrition" which accounted for all deaths.

22. The majority of these cases were reported, as would be expected, from the larger settlements. The crops generally were below normal, but many of these diagnoses were made by dispensers at rural clinics and were not confirmed.

23. Poliomyelitis. Eight cases were reported with three deaths. Prophylactic inoculations, with vaccine obtained from the Union and the United Kingdom, were given, on request, throughout the year.

24. Rabies. No cases were reported.

25. Relapsing fever (tick borne). Thirteen cases were diagnosed.

26. Respiratory diseases. The total recorded was 32,807 with 85 deaths, of which pneumonia was responsible for 79. Cases of pneumonia numbered 2,877 (lobar 587, bronchopneumonia 2,037, unspecified 232). Cases diagnosed as influenza numbered 5,169.

27. Trypanosomiasis. Seventy one cases of human sleeping sickness (all infected with T.rhodesiense) were diagnosed and admitted to Maun hospital. This is a notable increase over the number for 1957 (19). It is not, however, possible to state how much of the increase is due to spread of the fly or whether the patients present themselves more readily for examination and treatment at the district dispensaries. The majority of the cases were in an advanced state on admission and 4 deaths were recorded. It is noteworthy that none of these cases exhibited enlargement of the lymphatic glands.

28. Tuberculosis. This remains the major medical problem in the Territory. The number of cases reported during 1958 was 3,171 (double that for 1957) with 67 deaths. Again it is not possible to state precisely how much of this increase is due to the actual spread of infection or to patients presenting themselves more readily for treatment.

29. Extensions to existing hospitals of tuberculosis blocks have been approved as part of a Colonial Development and Welfare Fund Scheme and the first blocks will be opened in 1959. A total of 288 beds for the treatment of tuberculosis patients only will then be available.

30. Venereal diseases. Cases numbered 21,862 of which 15,611 were gonorrhoeal. Syphilis (all varieties) accounted for 5,179, the remainder being diagnosed as granuloma inguinale, lymphogranuloma and unspecified venereal disease.

31. Whooping Cough. 2,251 cases were reported with 6 deaths. Of this total 680 were reported from the Mahalapye district and 710 from N'gamiland. Regarding prophylaxis, the same remarks apply as for diphtheria (paragraph 11 above) as combined vaccine was offered.

DISEASES/........

DISEASES QUARANTINABLE ACCORDING TO THE INTERNATIONAL SANITARY REGULATIONS

32. Cholera. This disease has not been recorded in the Territory.

33. Plague. A case of human plague was suspected at Nokaneng in Ngamiland in November but diagnosis was not confirmed.

34. Smallpox. A localised outbreak in the Chobe area was being dealt with at the end of 1957. This was brought rapidly under control at the beginning of 1958.

35. Typhus Fever. Louse-borne typhus was not recorded.

36. Yellow Fever. No cases were diagnosed during 1958. Prophylactic vaccination is available to travellers at the main hospitals. 3,408 persons were given protection in N'gamiland, the majority of whom were African labour recruits examined by the Bechuanaland Protectorate Medical staff whilst en route to the Rand mines.

37. Relapsing Fever. Louse-borne relapsing fever was not recorded.

38. Food control. In villages near Government Administration offices, all shops and businesses were inspected by members of the senior health staff. These duties fell mainly on the two Health Inspectors.

39. One of the primary duties of the health staff is food control. At their headquarters, the two Inspectors were able to maintain continuous contact with the vendors for this purpose of food control. In other villages, which lie on main traffic routes, and in Maun, reasonably regular inspections were maintained.

40. At Lobatsi and at Francistown quantities of damaged and unsound foods were accepted on voluntary surrender terms by the Health Inspector. In such instances the vendor who surrendered unsound tinned goods, for instance, received a certificate of unsoundness which could be accepted, in satisfactory circumstances, by the wholesaler and the factory in lieu of payment for the goods by the retailer.

41. Hotel Inspections. The primary duty of Medical Department staff regarding hotel and restaurant inspections was to ensure hygienic maintenance of the services provided for the public. For these purposes every hotel and restaurant in the Territory was inspected by the local Medical Department officers on at least one occasion during 1958. Hotels and restaurants in the principal villages or thoroughfares used only by Africans were also inspected. Hotels serving non-Africans in Administrative centres were inspected by the Medical Officer of the district; by the Medical Officer of Health from Mafeking, and more frequently by the Divisional Health Inspector. Inspection reports included the liquor bars, the restaurant sections, the maintenance of sleeping quarters and general hygiene throughout.

42./......

42. The mileage covered by the two Health Inspectors was considerably increased by these duties at outstations.

43. Meat Inspection. Medical Department staff inspected meat offered for sale to the public during 1958 at Francistown, Mahalapye, Maun, Palapye and Serowe.

44. Government Abattoir, Francistown. This is the only abattoir in Bechuanaland where meat is inspected by Medical Department staff. Elsewhere the Veterinary Department carry out inspections. Carcases at Lobatsi Village Government Abattoir and at the Colonial Development Corporation Export Abattoir at Lobatsi are inspected by officers of the Veterinary Department at present.

45. In the other large tribal villages Medical Department staff inspect carcases for butchers' sales to the public. At these places there are no abattoirs. Open unscreened and extremely unsatisfactory slaughter poles are owned and used by various local butchers. The staff for maintenance and routine slaughter work at these slaughter poles is employed by the butcher who occupies the premises. Inspection, and the detention of condemnable carcases or portions thereof are undertaken by an African Sanitary Inspector. These inspectors are locally trained and have not reached the standard of the Royal Sanitary Institute, nor have they the Food and Meat Certificates of any reputable teaching school. They have been carefully taught locally, however, by Senior Service Health Inspectors who possess full qualifications. Certification of condemnation and destruction is reserved to the Medical Officer of the stations noted above. The Health Inspector, Francistown was particularly active in this branch of his work during 1958 and deserves commendation for his efforts to maintain continuity and standards, not only at Francistown but also at the village slaughter poles.

46. At Serowe there are eight separate butchers, each owning a different slaughter pole within the area of the village scheduled for control under the Sanitary Regulations. The other villages mentioned possess more than one private slaughter pole. At Mahalapye two butchers were persuaded by a former Medical Officer to construct enclosed and covered slaughter rooms.

SECTION III - VITAL STATISTICS

TABLE I

47. Estimated population figures:-

Europeans	3,173	o
Africans	292,755	x
Asiatics	248	o
Coloured	676	o
Total population .	296,853	

o 1956 Census
x 1946 Census (1956 census figures not yet available).

TABLE II/.......

TABLE II

European births and deaths:-

European births	81
Births per 1,000	25
European deaths over 1 year of age	24
European deaths under 1 year of age	3
Deaths per 1,000	8

TABLE III

Causes of European Deaths:-

Arteriosclerosis	1
Asthma	1
Atelectasis	1
Cancer	1
Cardiac Failure	6
Diphtheria	1
Gastric Ulcer	1
Haemorrhage, Cerebral	1
Leukaemia	2
Neo-Natal	1
Pneumonia	1
Prematurity	1
Senility	1
Suicide	1
Thrombosis, Cerebral	1
Thrombosis, Coronary	5
Uraemia	1
	27

48. Illness of Officials. Causes of morbidity of more than 14 days duration amongst Senior and Junior Service officers are given below :-

TABLE IV

Senior Service

Accident	2
Appendicitis	4
Asthma	1
Bronchitis	3
Brucellosis	3
Debility	2
Dyspepsia	1
Hepatitis, Infective	2
Herpes Zoster	2
Intervertebral Disc Lesion	1
Malaria	1
Menorrhagia	1
Neurosis	2
Pleurisy	2
Pneumonia, virus	1
Sinusitis	1
Synovitis	1
Tonsilitis	1
Trypanosomiasis	1
Upper respiratory infection	1
	36

All/........

All cases of Brucellosis occurred in members of the Veterinary Department.

Junior Service

Appendicitis	2
Bell's Palsy	1
Bronchitis	1
Cellulitis	1
Dermatitis	1
Furunculosis	1
Hemiplegia	1
Hypertension	2
Jaundice	1
Leukoplakia	1
Meningitis	1
Mumps	2
Pneumonia	3
Synovitis	1
Tuberculosis	7
Typhoid	1
Ulcer, chronic	1
	28

SECTION IV - MATERNITY AND CHILD WELFARE

49. 3,126 normal confinements were recorded in hospitals and maternity centres. In addition, 297 complicated cases were admitted and 211 cases of abortions or miscarriages. Ante-natal attendances numbered 14,880 and 701 post-natal attendances with 822 attendances classed under child-welfare.

SECTION V - HOSPITALS AND DISPENSARIES

50. Out-patients. There were 196,371 first attendances with 99,129 subsequent attendances. Other attendances (vaccinations, inoculations, medical examination for employment, etc.) amounted to 169,733.

51. In-patients. 14,744 in-patients were recorded during the year.

52. At the end of 1958 the number of hospital beds available, both Government and Mission, was 31 European, 563 African and 147 cots, an increase of 2 European, 24 African and 35 cots over 1957.

SECTION VI - HEALTH CENTRES AND DISPENSARIES

53. Two new Health Centres at Ghanzi and Tsabong were approaching completion at the end of 1958 and it is anticipated that both will be opened before the middle of 1959.

54. The Health Centres at Mahalapye and Gaberones have proved very successful. In 1958 Mahalapye dealt with 464 in-patients and 24,774 out-patients, and Gaberones with 668 and 22,371 respectively.

55. Dispensaries with resident African dispensers are established at the following centres :-

Kalkfontein/......

Kalkfontein
Kasane
Palapye
Pilikwe
Rakops
Shakawe
Tsau

56. Dispensaries are established at the following centres and visited regularly by a Medical Officer or Dispenser:-

Bains' Drift
Dikhatlong
Gabane
Gomare
Good Hope
Harper's Farm
Kachikau
Kalamare
Karakobis
Kuli
Kumukhuane
Machaneng
Mamono
Moeng
Mookane
Nojane
Nokaneng
Panda-ma-Tenga
Ramoutsa
Satau
Sefhare
Sehitwa
Sepopa
Seronga
Shoshong
Tsessebe

57. The following centres are now visited by Mission doctors:-

Digawana	(3)	Manyane	(3)
Ga-Thamaga	(4)	Mmathete	(3)
Hukuntsi	(5)	Mogemani	(3)
Kakia	(5)	Molapejang	
Kang	(5)	Molopojane	(3)
Kukong	(5)	Moshaneng	(1)
Lehututu	(5)	Moshupa	(1)
Letlakeng	(4)	Ntswelatsu	(4)
Lokwabe	(5)	Pitsani-Molopo	(4)
Lutlhe	(5)	Ranaka	(3)
Mabole	(3)	Tonoto	
Magwerapitsi	(3)	Tshane	(4)
Mankgodi	(4)	Tshidilamolomo	(3)

(1) Weekly visits
(3) Every three weeks
(4) Monthly visits
(5) Every two months.

58. For the first time for more than 20 years two new medical districts were created with headquarters respectively at Ghanzi and Palapye. The Medical Officer at Ghanzi, in addition to superintending the Health Centre now in the course of erection, will pay periodical visits not only to the Ghanzi farms area but also to the villages along the South West Africa border as far south as Nojane. The posting of a Medical Officer to Palapye will hasten the establishment of periodical clinics in the north-eastern portion of the Bamangwato Reserve where, until very recently, medical facilities were not available.

59./.........

59. Nursing Examinations. Results are given below:-

TABLE V

	Number of Candidates.	Passed.
First Year General Medical and Surgical	37	25
Second Year General Medical and Surgical	42	22
Third Year General Medical and Surgical	21	19
Final Midwifery	10	8

There were seven passes with Merit.

60. General. The total number of operations performed was 3,469 of which 710 were reckoned as major.

61. X-Ray Examinations. 3,476 were carried out.

62. Medical Examination on First Appointment. 318 were recorded.

SECTION VII - GENERAL

63. African Labour Recruitment. The total number of recruits examined and attested in the Territory was 21,185 who were examined at the centres shown in Table VI.

64. In addition 96,218 recruits and repatriates from Barotseland and Nyasaland were trnasferred by air lift to and from Francistown, the total number of miles flown being 1,502,708 without accident.

TABLE VI

	Number examined	Number of rejects
Francistown	1,331	113
Gaberones	1,782	78
Kanye	2,644	3
Lobatsi	3,372	238
Mahalapye	1,906	29
Maun	3,125	72
Mochudi	127	-
Molepolole	3,558	105
Serowe and Palapye	3,340	87
	21,185	725

65. Rejected candidates comprised 3.4% of the total number examined. The chief causes of rejection were as in former years; poor physique, under-age and chronic chest affections.

66./......

66. Prisons. There are two central prisons; one at Gaberones and one at Francistown, and there are lock-ups at 13 other centres. Rations are provided according to the prescribed diet scales and no complaints were received.

67. At stations where a Medical Officer is posted, regular weekly prison inspections are held; at other points inspections are held on the occasion of the Medical Officer's visit whilst on tour.

68. At Francistown a new modern prison has been opened. Francistown, Maun and Lobatsi now have water-borne sanitation.

69. Five cases of pulmonary tuberculosis were diagnosed amongst prisoners. Apparently all had contracted the disease prior to committal. All were treated in hospital. Otherwise, except for minor complaints, prisoners remained in good health. The daily ratio of number of prisoners in hospital to the total prison population was less than 1%.

70. Mental Home. During the year the accommodation of the Lobatsi Mental Home was increased by six beds, the total being now 30. During 1958 seven patients were admitted and six were discharged, the number of patients at 31st December, 1958 being 26. There were no deaths during this period.

71. Patients with whom the Lobatsi establishment is unable to deal are admitted, by arrangement with the Southern Rhodesian authorities, to Ingutsheni Mental Home. In 1958 six patients were admitted and seven discharged.

72. World Health Organization Projects: Bechuanaland 3 - Tuberculosis Control. A consultant visited the Territory in June and, on the strength of his report, a plan of operation was subsequently drawn up for a B.C.G. vaccination campaign to start in August, 1959.

Bechuanaland 5 - Fellowships. A two-year Fellowship to enable a Sister to complete a Sister-Tutor course in the United Kingdom was completed during the year.

73. Colonial Development and Welfare Fund Schemes. Scheme D.3067 - Development of Medical Services, made possible by this grant, was continued during the year.

74. Buildings. The following buildings were completed or in the course of erection at the end of December, 1958:-

Health Centre, Tsabong
Health Centre, Ghanzi
Tuberculosis Block, Maun
Tuberculosis Block, Francistown
Laundry, Francistown
Ante-natal Clinic, Mahalapye
Health Centre, Rakops
Tuberculosis Block, Gaberones
Tuberculosis Block, Lobatsi.

75./......

75. Publications.

Squires, B.T. Observations on the Oral Mucosa of the African. Cent.Afr. J. Med. March 1958.

76. Habit-Forming Drugs. Five permits were issued during the year. Drugs imported during the year were :-

Morphine	709.23 grammes
Cocaine	68.7 grammes
Cannabis	22.45 grammes

77. Finance. The total revenue from Government hospitals, health centres and dispensaries during 1958 amounted to £14,583. 19. 6d., an increase of £2,871.18.0d over 1957.

TABLE VII

78. The total ordinary expenditure of the Department for the financial year ended 31st March, 1959 was :-

Personal Emoluments	£70,546
Upkeep of Hospitals and Dispensaries	31,360
Maintenance of Lunatics	2,628
Pathological Investigations	1,000
Grants to Missions and Union Hospitals	3,256
Public Health Measures	5,127
Sanitation	4,101
Office and Incidental Expenses ..	327
Travelling and Transport	10,940
Bicycles	16
Contribution to C.D. & W. Scheme D.3067 - Development of Medical Services	23,635
Total :	£152,936

79. The total ordinary revenue of the Bechuanaland Protectorate during the period 1958/59 was £1,125,292. The proportion of ordinary medical expenditure to ordinary revenue of the Territory was 13.5%.

80. The total ordinary expenditure of the Protectorate during the period 1958/59 was £1,612,932. The proportion of ordinary medical expenditure to ordinary expenditure of the Protectorate was just over 9%.

81. In conclusion I have again to acknowledge the loyalty and devotion to duty of the staff of this Department.

B. T. SQUIRES.

DIRECTOR OF MEDICAL SERVICES

MAFEKING.

APPENDIX I

CLIMATE IN RELATION TO DISEASE IN THE BECHUANALAND PROTECTORATE

Bechuanaland presents the climatic features of a sunken plateau, centrally situated within a great land mass. Its rainfall bearing winds pass over high ranges in the east, the south and parts of the west of the sub-continent, but much of the ocean moisture is dropped on the Drakensberg, on the high veld of the Transvaal and in Southern Rhodesia. The west is screened from moisture by a cold ocean current from the South West African coast which accounts for the presence of the Namib desert and the semi-desert of the Kalahari. Wide ranges of temperature prevail between seasons and also between day and night, and frosts occur in winter.

Small flying insects such as mosquitoes are not well adapted to this climate. Anopheles gambiae, being a heat-loving insect, specially adapted to African tropical, coastal and rain forest climates, cannot stand the winters in Bechuanaland and apparently disappears entirely at that time from the southern part of the Territory.

Thunder storms often initiate the rainy seasons and the violent precipitations flush out the river beds which have remained dry during seven or eight months of the year. Pools form in the eroded river beds and it is mainly in the larger of these pools that Bulinus (Physopsis) species and Biomphalaria species of snails survive. Their survival depends upon their hibernation abilities, and so Bilharzia is usually a seasonal disease.

Climate, local habits and clothing customs do not appear to favour body lice.

Bechuanaland, regarded from the public health point of view, has three climatic zones. First, the Kalahari south of the twenty-first degree of latitude and between the twentieth and twenty-sixth east degrees of longitude. The second area includes desert and swamp in N'gamiland and Chobe districts. Both these areas are lower than the immediate surrounding countries and, except the most northerly section, suffer more from rain shortages than the third area lying east of east longitude twenty-five degrees. Thirdly, hills and low ridges in the eastern section accommodate large villages, supplied by springs and dams from the few rain clouds which succeed in carrying their vapour over the high veld of the Transvaal and other south-eastern areas of the Union of South Africa.

These three areas of different moisture and temperature averages provide three localities of public health problems within the Protectorate. Sudan-like conditions prevail in the Kalahari; tropical rain forest types exist along the Zambesi valley and the tropical diseases of moist areas can be found in the

Chobe/.......

Chobe and N'gamiland areas, whereas the eastern and more closely inhabited side provides more frequent outbreaks of the diseases of milder climates.

Over all, the lack of surface water handicaps the population. The water shortage is being attacked by mechanical aids, such as catchment dams and wells. In recent years some of the dangers associated with open artificial water supplies have been reduced by use of well boring and mechanical pumps but the increase of artificial dams and of shallow wells can bring new public health difficulties into the area surrounding them.

APPENDIX II

LIST OF SNAILS FOUND IN THE BECHUANALAND PROTECTORATE BY THE MEDICAL DEPARTMENT BETWEEN 1955 AND 1958 (MARCH)

Not carriers of Human Bilharzia:

Pila gradata
Lanistes olivancius
Viviparous species
Achatina damarensis
Achatina zebra
Xerocerastus damarensis
Anisus natalensis
Lymnaea natalensis.

Carriers in other parts of Africa but not involved with human Bilharzia in the Bechuanaland Protectorate so far as is known at present:

Bulinus bulinus tropicus
Bulinus bulinus forskalii
Bulinus bulinus reticulatus.

Carriers of Bilharzia in the Bechuanaland Protectorate:

Bulinus (Physopsis) africanus
Biomphalaria pfeifferi.

All the above have been identified by the World Health Organization Snail Identification Centre at Salisbury, Southern Rhodesia. Places where the snails have been found are as follows :-

Pila gradata:	Maun
Lanistes species:	Maun
Lymnaea natalensis:	Most pans and dams in the Bakwena, Bangwaketse, Bamangwato, N'gamiland, Bakgatla Tribal Territories, and in the Lobatsi and Gaberones districts (in fact very widespread).
Viviparous species:	Maun
Achatina damarensis:	Kang (Kalahari desert)
Achatina zebra:	Lephephe, Bataamane, Ramatsane (Southern Division)
Xerocerastus damarensis:	Kokojane dam in Bakwena Reserve, Lephephe, Ramatsane, Phuduhudu, Tsane: (Southern Division of Bechuanaland Protectorate) all over the dry desert areas away from water. As yet no live specimens have been found but thousands of shells, especially under small bushes.

Anisus/.........

Anisus natalensis:	Seruli dam near the railway station; Ramathlabama, near the road and railway in the Bechuanaland Protectorate.
Bulinus bulinis tropicus:	Seruli station dam, Serowe dams, Mabuana pan on Martins Drift road, Molopo River, Mochudi beside Notwani River, Nata, Makarikari Pan, Francistown, Mahalapye, Lobatsi, Mephuphe dam near Transvaal, Lephephe. (In fact widespread).
Bulinus bulinus reticulatus:	Mochudi pools near Notwani River.
Bulinus bulinus forskalii:	Maun, Francistown, Mochudi, Tsessebe, Molopo River, Mosinki near Molepolole, Konawa Pan between Lephephe and Mahalapye, Lobatsi.
Bulinus (Physopsis) africanus:	Maun, Francistown, Tantabane Farm, Palapye, Mochudi, Lobatsi, Kolobeng, stream in Bakwena Reserve, Metsimaswane stream by main road, pools in streams near Morwa, Notwani River.
Biomphalaria pfeifferi:	Maun.

This list by no means indicates all the habitats of these snails.

ANNEXURE "C"

BECHUANALAND PROTECTORATE

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1958

DISEASES	IN-PATIENTS					OUT-PATIENTS	
	*Remaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases Treated	≠Remaining in Hospital at end of 1958	Male	Female
A.							
1. Tuberculosis of respiratory system	102	430	55	532	124	1,014	1,103
2. Tuberculosis of meninges and central nervous system	3	9	6	12	–	19	29
3. Tuberculosis of intestines, peritoneum and mesenteric glands	2	17	1	19	4	166	172
4. Tuberculosis of bones and joints	11	46	2	57	7	72	59
5. Tuberculosis, all other forms	–	65	2	65	12	248	289
6. Congenital syphilis	–	8	–	8	1	489	657
7. Early syphilis	–	8	–	8	–	1,367	1,282
8. Tabes dorsalis	–	–	–	–	–	1	–
9. General paralysis of insane	–	–	–	–	–	–	–
10. All other syphilis	1	15	–	16	1	815	1,568
11. Gonococcal infections	3	76	1	79	2	5,480	10,131
12. Typhoid Fever	1	27	5	28	3	7	10
13. Paratyphoid fever and other Salmonella infections	–	1	–	1	–	–	1
14. Cholera	–	–	–	–	–	–	–
15. Brucellosis (urdulant fever)	–	1	–	1	–	1	–
16. (a) Bacillary dysentery	–	41	2	41	–	168	192
(b) Amoebiasis	1	25	1	26	2	21	15
(c) Other unspecified forms of dysentery	–	7	1	7	–	269	330
17. Scarlet Fever	–	–	–	–	–	1	–
18. Streptococcal sore throat	1	83	–	84	1	704	1,096
19. Erysipelas	–	6	3	6	–	–	4
20. Septicaemia and pyaemia	–	9	2	9	1	5	3
21. Diphtheria	1	165	34	166	1	89	98
22. Whooping Cough	2	55	6	57	–	1,004	1,247
23. Meningococcal infections	–	9	2	9	–	2	3
Total carried forward	129	1,114	125	1,243	162	11,981	18,308

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		*Remaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases Treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	129	1,114	125	1,243	162	11,981	18,308
24.	Plague	–	–	–	–	–	–	–
25.	Leprosy	1	3	–	4	1	19	8
26.	Tetanus	–	4	2	4	–	7	1
27.	Anthrax	–	–	–	–	–	1	–
28.	Acute Poliomyelitis	–	3	–	3	1	5	3
29.	Acute infectious encephalitis	–	–	–	–	–	–	–
30.	Late effects of acute poliomyelitis and acute infectious encephalitis	–	1	–	1	1	7	7
31.	Smallpox	–	1	–	1	–	44	59
32.	Measles	4	218	7	222	3	1,380	1,531
33.	Yellow Fever	–	–	–	–	–	–	–
34.	Infectious hepatitis	–	21	3	21	–	31	19
35.	Rabies	–	–	–	–	–	–	–
36.	(a) Louse-borne epidemic typhus	–	–	–	–	–	–	–
	(b) Flea-borne epidemic typhus (murine)	–	–	–	–	–	–	–
	(c) Tick-borne epidemic typhus	–	–	–	–	–	2	14
	(d) Mite-borne typhus	–	–	–	–	–	–	–
	(e) Other and unspecified typhus	1	1	–	1	–	5	1
37.	(a) Vivax malaria (benign tertian)	–	6	–	6	–	26	6
	(b) Malariae malaria (quartan)	–	–	–	–	–	–	–
	(c) Falciparum malaria (malignant tertian)	3	137	5	140	1	1,497	1,227
	(d) Blackwater fever	–	–	–	–	–	–	–
	(e) Other and unspecified forms of malaria	–	16	–	16	–	52	42
38.	(a) Schistosomiasis vesical (S.Laematobium)	–	7	–	7	–	67	44
	(b) Schistosomiasis intestinal (S.mansoni)	–	–	–	–	–	–	–
	(c) Schistosomiasis pulmonary (S.japonicum)	–	–	–	–	–	–	–
	(d) Other and unspecified schistosomiasis	–	2	–	2	–	14	15
	carried forward ..	136	1,523	140	1,659	166	15,099	21,266

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		≠Remaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	136	1,523	140	1,659	166	15,099	21,266
39.	Hydatid disease	-	1	-	1	1	-	-
40.	(a) Onchocerciasis	-	-	-	-	-	-	-
	(b) Loiasis	-	-	-	-	-	-	-
	(c) Filariasis (bancrofti)	-	1	-	1	1	2	-
	(d) Other filariasis	-	-	-	-	-	-	-
41.	Ankylostomiasis	-	-	-	-	-	-	-
42.	(a) Tapeworm infestation and other cestode infestations	-	43	-	43	1	289	323
	(b) Ascariasis	-	7	-	7	-	74	81
	(c) Guinea worm (dracunculosis)	-	-	-	-	-	-	-
	(d) Other disease due to helminths	-	3	-	3	-	76	92
43.	(a) Lymphogranuloma venereum	-	-	-	-	-	3	3
	(b) Granuloma inguinale, venereal	-	1	-	1	-	28	17
	(c) Other and unspecified venereal diseases	-	-	-	-	-	13	15
	(d) Foodpoisoning infection and intoxication	-	7	1	7	-	19	4
	(e) Relapsing Fever	-	6	-	6	-	9	4
	(f) Leptospirosisicterohaemorrhagica (Weil's disease)	-	1	1	1	-	1	-
	(g) Yaws	-	-	-	-	-	4	12
	(h) Chickenpox	-	5	-	5	1	134	141
	(i) Dengue	-	-	-	-	-	-	-
	(j) Trachoma	-	14	-	14	-	83	127
	(k) Sandfly fever	-	-	-	-	-	2	-
	(l) Leishmaniasis	-	-	-	-	-	-	-
	(m) -a Trypanosomiasis gambiensis	-	-	-	-	-	-	-
	-b Trypanosomiasis rhodesiensis	6	71	4	77	2	46	27
	-c Other and unspecified Trypanosomiasis	-	-	-	-	-	-	-
	(n) Dermatophytosis	-	1	-	1	-	97	136
	(o) Scabies	-	6	-	6	1	1,388	1,513
	(p) All other diseases classified as infective and parasitic	-	3	-	3	1	95	167
	carried forward	142	1,693	146	1,835	174	17,462	23,928

DISEASES	IN-PATIENTS					OUT-PATIENTS	
	≭Remaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
brought forward	142	1,693	146	1,835	174	17,462	23,928
44. Malignant neoplasm of buccal cavity and pharynx	-	-	-	-	-	2	1
45. Malignant neoplasm of oesophagus	-	2	-	2	-	1	1
46. Malignant neoplasm of stomach	-	5	1	5	-	5	4
47. Malignant neoplasm of intestine, except rectum	-	5	2	5	-	4	2
48. Malignant neoplasm of rectum	-	-	-	-	-	-	3
49. Malignant neoplasm of larynx	-	-	-	-	-	-	-
50. Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	-	3	1	3	-	-	1
51. Malignant neoplasm of breast	-	7	2	7	-	-	14
52. Malignant neoplasm of cervix uteri	-	25	2	25	-	-	50
53. Malignant neoplasm of other and unspecified parts of uterus	-	4	-	4	-	-	25
54. Malignant neoplasm of prostate	-	-	-	-	-	1	-
55. Malignant neoplasm of skin	1	10	-	11	2	10	6
56. Malignant neoplasm of bone and connective tissue	-	5	2	5	1	4	-
57. Malignant neoplasm of all other and unspecified sites ..	1	18	6	19	2	10	20
58. Leukaemia and aleukaemia	-	2	1	2	-	1	1
59. Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	-	16	1	16	-	43	62
60. Benign neoplasms and neoplasms of unspecified nature ..	-	84	-	84	-	97	332
61. Nontoxic goitre	-	1	-	1	-	5	23
62. Thyrotoxicosis with or without goitre	-	2	1	2	-	-	14
63. Diabetes mellitus	-	3	-	3	-	1	-
64. (a) Beriberi	-	1	-	1	-	8	15
(b) Pellagra	-	10	-	10	1	161	324
(c) Scurvy	-	12	-	12	-	189	301
(d) Other deficiency states	5	134	14	139	5	2,196	2,922
carried forward	149	2,042	179	2,191	185	20,200	28,049

DISEASES	≢Remaining in Hospital at end of 1957	IN-PATIENTS Yearly Admissions	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	OUT-PATIENTS Male	Female
brought forward	149	2,042	179	2,191	185	20,200	28,049
65. Pernicious and other hyper chromic anaemias	-	-	-	-	-	3	2
(b) Iron deficiency anaemias (hypo-chromic)	1	20	4	21	1	168	550
(c) Other specified and unspecified anaemias	-	20	1	20	-	98	426
66. (a) Asthma	-	93	1	93	-	624	918
(b) All other allergic disorder, endocrine, metabolic and blood diseases	2	63	9	65	1	259	344
67. Psychoses	1	14	1	15	1	18	22
68. Psychoneuroses and disorders of personality	1	22	-	23	1	42	81
69. Mental deficiency	-	1	-	1	-	14	36
70. Vascular lesions affecting central nervous system	-	19	6	19	-	19	12
71. Nonmeningococcal meningitis	-	13	3	13	1	4	4
72. Multiple sclerosis	-	1	-	1	1	1	-
73. Epilepsy	4	22	1	26	-	101	54
74. Inflammatory diseases of eye	-	134	1	134	3	1,921	2,469
75. Cataract	2	25	-	27	-	93	148
76. Glaucoma	-	25	-	25	-	60	80
77. (a) Otitis externa	-	4	-	4	1	402	532
(b) Otitis media and mastoiditis	-	34	-	34	4	526	658
(c) Other inflammatory diseases of ear	-	1	-	1	-	221	318
78. (a) All other diseases and conditions of eye	-	57	-	57	-	593	627
(b) All other diseases of the nervous system and sense organs	1	41	3	42	4	133	142
79. Rheumatic fever	2	39	2	41	2	78	94
80. Chronic rheumatic heart disease	3	30	5	33	4	39	45
81. Arteriosclerotic and degenerative heart disease	5	46	17	51	1	25	25
82. Other disease of heart	1	28	7	29	2	124	216
83. Hypertension with heart disease	-	8	2	8	-	23	17
carried forward	172	2,802	242	2,974	212	25,789	35,869

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		*Remaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	172	2,802	242	2,974	212	25,729	35,869
84.	Hypertension without mention of heart	-	22	-	22	-	65	93
85.	Disease of arteries	-	7	1	7	-	14	8
86.	Other diseases of circulatory system	5	46	2	51	3	61	49
87.	Acute upper respiratory infections	6	277	2	283	2	6,422	8,047
88.	Influenza	2	422	2	424	4	2,169	3,002
89.	Lobar pneumonia	5	231	17	236	6	322	265
90.	Bronchopneumonia	6	446	53	452	13	1,029	1,009
91.	Primary atypical, other and unspecified pneumonia	1	112	9	113	1	119	133
92.	Acute bronchitis	1	146	3	147	-	4,733	5,547
93.	Bronchitis, chronic and unqualified	-	164	2	164	1	2,045	2,277
94.	Hypertrophy of tonsils and adenoids	1	136	-	137	3	465	932
95.	Empyema and abscess of lung	-	2	1	2	-	7	3
96.	Pleurisy	-	40	-	40	-	55	55
97.	(a) Pneumoconiosis	-	-	-	-	-	-	-
	(b) All other respiratory diseases	-	22	-	22	-	1,879	1,982
98.	(a) Dental caries	-	6	-	6	-	1,299	2,127
	(b) All other diseases of teeth and supporting structures	-	30	-	30	2	399	527
99.	Ulcer of stomach	-	5	-	5	-	13	5
100.	Ulcer of duodenum	-	2	-	2	1	10	1
101.	Gastritis and duodenitis	-	38	-	38	4	572	919
102.	Appendicitis	1	73	2	74	4	38	75
103.	Intestinal obstruction and hernia	1	43	7	44	1	155	134
104.	(a) Gastro-enteritis and colitis between 4 weeks and 2 years	4	209	38	213	4	3,266	3,337
	(b) Gastro-enteritis and colitis, ages 2 years and over	2	164	12	166	2	1,344	1,605
	(c) Chronic enteritis and ulcerative colitis	-	88	5	88	3	216	274
105.	Cirrhosis of liver	1	23	4	24	4	30	14
106.	Cholelithiasis and cholecystitis	-	7	-	7	-	21	29
107.	Other diseases of digestive system	2	125	2	127	1	4,302	7,072
	carried forward	210	5,688	404	5,898	271	56,839	75,390

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		xRemaining in Hospital at end of 1957	Yearly Admissions	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	210	5,688	404	5,898	271	56,839	75,390
108.	Acute nephritis	1	30	4	31	-	25	15
109.	Chronic, other and unspecified nephritis	1	20	7	21	-	114	65
110.	Infections of kidney	-	10	1	10	1	179	252
111.	Calculi of urinary system	3	1	-	4	-	16	14
112.	Hyperplasia of prostate	2	11	1	13	1	41	-
113.	Diseases of breast	-	39	-	39	1	8	320
114.	(a) Hydrocele	3	20	-	23	-	63	2
	(b) Disorders of menstruation	-	83	-	83	-	-	5,836
	(c) All other disease of the genito-urinary system	8	378	7	386	12	1,163	4,757
115.	Sepsis of pregnancy, childbirth and the puerperium	-	15	1	15	-	-	33
116.	Toxaemias of pregnancy and the puerperium	-	13	-	13	-	-	11
117.	Haemorrhage of pregnancy and childbirth	-	41	1	41	-	-	33
118.	Abortion without mention of sepsis or toxaemia	2	162	-	164	1	-	334
119.	Abortion with sepsis	1	10	3	11	-	-	17
120.	(a) Other complications of pregnancy, childbirth and puerperium	5	277	12	282	1	-	3,935
	(b) Delivery without complications	35	3,132	-	3,167	45	-	1,828
121.	Infections of skin and subcutaneous tissue	7	238	1	245	11	3,738	4,512
122.	Arthritis and spondylitis	1	35	-	36	1	414	537
123.	Muscular rheumatism and rheumatism unspecified	4	70	-	74	3	4,085	6,381
124.	Osteomyelitis and periostitis	-	32	-	32	2	45	37
125.	Ankylosis and acquires musculoskeletal deformities	1	1	-	2	-	3	2
126.	(a) Chronic Ulcer of Skin (including tropical ulcer)	3	5	-	8	1	71	107
	(b) All other diseases of skin	5	124	-	129	4	1,570	1,986
	(c) All other diseases of musculoskeletal system	-	84	-	84	8	223	193
127.	Spina bifida and meningocele	-	3	-	3	-	1	1
128.	Congenital malformations of circulatory system	17	-	-	17	-	4	8
	carried forward	309	10,522	442	10,831	363	68,602	106,606

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		✱Remaining in Hospital at end of 1957	Yearly Admission	Total Deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	309	10,522	442	10,831	363	68,602	106,606
129.	All other congenital malformations	1	18	3	19	-	20	21
130.	Birth injuries	4	12	3	16	4	65	86
131.	Postnatal asphyxia and atelectasis	-	3	1	3	-	-	2
132.	(a) Diarrhoea of newborn (under 4 weeks)	-	10	-	10	-	131	185
	(b) Ophthalmia neonatorum	-	-	-	-	-	173	165
	(c) Other infections of newborn	-	4	-	4	-	77	119
133.	Haemolytic disease of newborn	-	3	3	3	-	-	3
134.	All other defined diseases of early infancy	-	976	5	976	14	554	1,558
135.	Ill-defined diseases peculair to early infancy and immaturity, unqualified	1	40	22	41	-	24	22
136.	Senility without mention of psychosis	-	9	4	9	-	42	76
137.	(a) Pyrexia of unknown origin	1	46	2	47	-	124	142
	(b) Observation, without need for further medical care	18	1,414	-	1,432	14	1,934	4,007
	(c) All other ill-defined causes of morbidity ..	8	227	5	235	7	1,853	2,753
	Accidents, Poisonings, and Violence (External Cause)							
A.E.								
138.	Motor vehicle accidents	1	57	2	58	5	76	29
139.	Other transport accidents	6	68	3	74	2	168	68
140.	Accidental poisoning	3	28	-	31	-	46	37
141.	Accidental falls	9	180	-	189	2	688	344
142.	Accident caused by machinery	3	17	-	20	-	49	26
143.	Accident caused by fire and explosion of combustible material	4	75	7	79	4	499	449
144.	Accident caused by hot substance, corrosive liquid, steam and radiation	-	71	1	71	2	181	185
145.	Accident caused by firearm	1	10	1	11	-	12	5
146.	Accidental drowning and submersion	-	2	1	2	-	-	-
147.	Foreign body entering eye and adnexa	-	7	-	7	1	106	46
	carried forward	369	13,799	506	14,168	418	75,424	116,934

	DISEASES	IN-PATIENTS					OUT-PATIENTS	
		*Remaining in Hospital at end of 1957	Yearly Admission	Total deaths	+Total cases treated	≠Remaining in Hospital at end of 1958	Male	Female
	brought forward	369	13,799	506	14,168	418	75,424	116,934
	Foreign body entering other orifice	-	24	1	24	-	119	96
	Accidents caused by bites and stings of venomous animals and insects	1	62	1	63	-	252	210
	Other accidents caused by animals	5	77	1	82	6	286	81
	All other accidental causes	6	253	-	259	8	1,595	630
148.	Suicide and self inflicted injury	1	4	1	5	-	22	8
149.	Homicide and injury purposely inflicted by other persons (not in war)	4	110	2	114	4	366	348
150.	Injury resulting from operations of war	-	-	-	-	-	-	-
	Total carried forward	386	14,329	511	14,715	436	78,064	118,307
	Lobatsi Mental Home	25	1	-	26	26		
	TOTAL :	411	14,330	511	14,741	462	78,064	118,307

* The year previous to that for which the return is made.

+ Total cases treated include those remaining in Hospital at the end of the previous year.

≠ The figures in this column to be carried on to next year's Return.

1964-1

BUREAU OF HYGIENE & TROPICAL DISEASES
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